UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,276	07/22/2003	Eric Christensen	200208833-1	7482

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EXAMINER
MILIA, MARK R

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
12/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)
	10/624,276	CHRISTENSEN, ERIC
	Examiner	Art Unit
	Mark R. Milia	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 October 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 25-41* is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 25-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 July 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☐ All b)☐ Some * c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election without traverse of claims 1-15, 25-34, and 35-41 (Group I) in the reply filed on 10/8/07 is acknowledged.

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "**250**" has been used in Fig. 2 to designate both "Volatile RAM" and "Printing Device System". The reference character **250** is also used on page 7 for both elements. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference character(s) not mentioned in the

description: Fig. 4, reference character **436**. Corrected drawing sheets in compliance

with 37 CFR 1.121(d), or amendment to the specification to add the reference

character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply

to the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. Each drawing sheet submitted

after the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 11 recites the limitation "the software patch" in the last line of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the software object" in the last line of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

5.   A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer <u>cannot</u> overcome a double patenting rejection based upon 35 U.S.C. 101.

6.   Claims 1 and 35 are rejected under 35 U.S.C. 101 as claiming the same

invention as that of claims 1 and 7 of prior U.S. Patent No. 7,043,166 to Parry et al.

Claims 1 and 35 of the instant invention define a replaceable printing device component

storing firmware to be loaded into a printing device. Claims 1 and 7 of Parry also

defines a replaceable printing device component storing firmware to be loaded into a

printing device. This is a double patenting rejection.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1-6, 8-14, 25-28, 32-36, 38, and 40-41 are rejected under 35

U.S.C. 102(b) as being anticipated by U.S Patent No. 5,930,553 to Hirst et al.

Regarding claim 1, Hirst discloses a priming device system comprising: a printing

device having firmware (see Fig. 1 (**17**) and column 6 lines 3-5), a replaceable printing

device, component storing a firmware patch for the firmware, and coupled to the priming

device (see Figs. 1 and 2, column 4 lines 45-49, and column 5 lines 19-23), and

wherein the printing device is configured to patch the firmware patch into the firmware

(see column 5 line 54-column 6 line 3).

Regarding claim 25, Hirst discloses a priming device comprising: a memory unit

to store firmware (see Fig. 1 (**17**) and column 6 lines 3-5), a processing unit coupled to

the memory unit (see Fig. 1 (**13**) and column 4 lines 26-27), and at least one of a patch

load routine stored in the memory unit that when executed by the processor, causes the

processor to perform actions comprising patching firmware stored on the memory unit

from a software object stored on a coupled replaceable printing device component; and

a routine stored in the memory unit to download the patch load routine from the coupled

replaceable printing device component (see Figs. 1 and 2, column 4 lines 45-49, column 5 lines 19-23, and column 5 line 54-column 6 line 3).

Regarding claim 35, Hirst discloses a method comprising: coupling a replaceable printing device component to a printing device (see Figs. 1 and 2, column 4 lines 45-49, and column 5 lines 19-23) and patching printing device firmware stored on the replaceable printing device component into firmware of the printing device (see Figs. 1 and 2, column 4 lines 45-49, column 5 lines 19-23, and column 5 line 54-column 6 line 3).

Regarding claim 2, Hirst further discloses wherein the replaceable printing device component comprises a memory unit and the printing device firmware patch is stored in the memory unit (see Figs. 1 and 2, column 4 lines 45-49, column 5 lines 19-23, and column 5 line 54-column 6 line 3).

Regarding claim 3, Hirst further discloses wherein the replaceable printing device component comprises terminals, the printing device comprises a computing unit and a coupled communication link, and the terminals are operable to couple to the communication link, such that the replaceable printing device component memory unit couples to the printing device computing unit (see Figs. 1-3, column 4 lines 45-49, column 5 lines 19-23, and column 5 line 54-column 6 line 3).

Regarding claim 4, Hirst further discloses wherein the printing device comprises a computing unit that is operable to couple to the replaceable printing device component memory unit, the printing device computing unit is configured to read the memory unit, and the replaceable printing device component memory unit is configured to be read by

the computing unit (see Figs. 1-3, column 4 lines 45-49, column 5 lines 19-23, and

column 5 line 54-column 6 line 3).

Regarding claim 5, Hirst further discloses wherein the replaceable printing device

component is further storing data indicating where to load the firmware patch on a

memory of the printing device (see column 5 lines 25-27 and 43-65).

Regarding claim 6, Hirst further discloses wherein the replaceable printing device

component is further storing data identifying a type of memory on which the firmware

patch is to be loaded in the printing device (see column 5 lines 43-65).

Regarding claims 8 and 36, Hirst further discloses wherein the printing device

comprises a non-volatile reprogrammable memory, and the printing device is configured

to patch the firmware patch on the non-volatile reprogrammable memory when the

firmware is stored on the non-volatile reprogrammable memory (see column 5 lines 54-

65).

Regarding claim 9, Hirst further discloses wherein the replaceable printing device

component is further storing a patch load routine (see column 5 line 45-column 6 line 3).

Regarding claim 10, Hirst further discloses wherein the printing device comprises

a volatile RAM, and the printing device is configured to patch the firmware when the

firmware is stored on the volatile RAM (see Fig. 3 and column 5 lines 25-27 and 43-48).

Regarding claim 11, Hirst further discloses wherein the printing device has a

memory unit storing the firmware, and further storing instructions that cause the

computing unit to patch the software patch into the firmware (see Figs. 1 (**17**) and 3).

Regarding claims 12 and 26, Hirst further discloses wherein the printing device is configured to check for firmware patches available from the replaceable printing device component (see column 4 lines 45-67 and column 5 lines 54-65).

Regarding claim 13, Hirst further discloses wherein the printing device is configured to read data associated with the firmware patch, and applying the firmware patch according to the data (see Figs. 1 and 2, column 4 lines 45-49, column 5 lines 19-23, and column 5 line 54-column 6 line 3).

Regarding claim 14, Hirst further discloses wherein the printing device is configured to verify whether the media storing the firmware is compatible with the software object (see column 4 lines 45-67 and column 5 lines 54-65).

Regarding claim 27, Hirst further discloses wherein the patching action further comprises reading data associated with the software object, and applying the software object according to the data (see column 5 lines 19-23 and 45-65).

Regarding claim 28, Hirst further discloses wherein the data includes at least one of version data, printing device memory type data, and memory location on the computer readable media (see Fig. 2 and column 5 lines 19-23).

Regarding claim 32, Hirst further discloses wherein the memory unit comprises a media including at least one of a volatile RAM and a non-volatile reprogrammable memory, and the firmware to be patched is stored on the media, and wherein the patching action comprises patching the firmware on the media (see Fig. 3 and column 5 lines 43-48).

Regarding claims 33 and 38, Hirst further discloses wherein the patching action

further comprises at least one of patching the firmware into a reprogrammable non-

volatile memory of the printing device if the firmware is to execute from the

reprogrammable non-volatile memory; and patching the firmware into a volatile RAM of

the printing device if the firmware is to execute from the volatile RAM (see Fig. 3 and

column 5 lines 25-27, 43-48, and 54-65).

Regarding claim 40, Hirst further discloses initializing the printing device, and

wherein the initializing action comprises the patching action (see column 4 lines 45-67).

Regarding claim 41, Hirst further discloses wherein said patching comprises

reading the printing device firmware stored on the replaceable printing device

component (see column 5 line 43-column 6 line 3).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 7, 15, 31, 34, and 39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hirst as applied to claims 1, 25, and 35 above, and further in view of

Japanese Patent Document No. 2002-166628 to Tanaka et al. Reference will be made

to the attached English machine translation.

Regarding claim 7, Hirst does not disclose expressly wherein the replaceable printing device component is further storing data identifying a version of the firmware patch.

Tanaka discloses wherein the replaceable printing device component is further storing data identifying a version of the firmware patch (see paragraphs 14, 24-25, and 45-55).

Regarding claim 15, Hirst does not disclose expressly wherein the replaceable printing device component stores data indicating the version of the firmware patch and the printing device is configured to verify whether the version of the firmware patch is compatible with the firmware.

Tanaka discloses wherein the replaceable printing device component stores data indicating the version of the firmware patch and the printing device is configured to verify whether the version of the firmware patch is compatible with the firmware (see paragraphs 14, 24-25, and 45-55).

Regarding claim 31, Hirst does not disclose expressly wherein the replaceable printing device component stores data indicating a version of the software object and the verifying action comprises verifying whether the version of the software object is compatible with the firmware.

Tanaka discloses wherein the replaceable printing device component stores data indicating a version of the software object and the verifying action comprises verifying whether the version of the software object is compatible with the firmware (see paragraphs 14, 24-25, and 45-55).

Regarding claims 34 and 39, Hirst does not disclose expressly wherein the patching action further comprises reading from said replaceable printing device the printing device firmware versions to which the printing device firmware stored on the replaceable printing device component is applicable, and patching said printing device firmware only if said printing device firmware version is one of the versions to which the printing device firmware stored on the replaceable printing device component is applicable.

Tanaka discloses wherein the patching action further comprises reading from said replaceable printing device the printing device firmware versions to which the printing device firmware stored on the replaceable printing device component is applicable, and patching said printing device firmware only if said printing device firmware version is one of the versions to which the printing device firmware stored on the replaceable printing device component is applicable (see paragraphs 14, 24-25, and 45-55).

Hirst & Tanaka are combinable because they are from the same field of endeavor, a memory module storing firmware attached to a printing device consumable.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the identifying and verifying of a version of the firmware, as described by Tanaka, with the system of Hirst because it is known in the art when downloading updates to an application to check the version to make sure it is a later released version than the version already being used. It is common for companies to release new versions of their applications periodically to fix problems or to enhance

features of the application and when a user is to install the application, the version
information is queried to make sure the application will run on the user's system and
that it is actually and upgrade from the version currently running on the system.

Therefore, it would have been obvious to combine Tanaka with Hirst to obtain the
invention as specified in claims 7, 15, 31, 34, and 39.

11.   Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Hirst as applied to claim 25 above, and further in view of Tanaka.

Regarding claim 29, Hirst does not disclose expressly wherein the patching
action comprises verifying whether the software object stored on the replaceable
printing device component is appropriate for patching the firmware.

Tanaka discloses wherein the patching action comprises verifying whether the
software object stored on the replaceable printing device component is appropriate for
patching the firmware (see paragraphs 14, 24-25, and 45-55).

Hirst & Tanaka are combinable because they are from the same field of
endeavor, a memory module storing firmware attached to a printing device consumable.

At the time of the invention, it would have been obvious to a person of ordinary
skill in the art to combine the verifying of the software object, as described by Tanaka,
with the system of Hirst.

The suggestion/motivation for doing so would have been to ensure proper
compatibility and thereby decrease the possibility of incorrect firmware patches and
system inoperability.

Therefore, it would have been obvious to combine Tanaka with Hirst to obtain the

invention as specified in claim 29.

Regarding claim 30, Tanaka further discloses wherein the memory unit

comprises media to store the firmware and wherein the verifying action

cOmprisesverifying whether the media storing the firmware is compatible with the

software object (see paragraphs 14, 24-25, and 45-55).

12.   Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst as

applied to claim 36 above, and further in view of Tanaka.

Hirst does not disclose expressly resetting the printing device after the patching

action.

Tanaka discloses resetting the printing device after the patching action (see

paragraph 59).

Hirst & Tanaka are combinable because they are from the same field of

endeavor, a memory module storing firmware attached to a printing device consumable.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the resetting of the printing device after patching the firmware,

as described by Tanaka, with the system of Hirst.

The suggestion/motivation for doing so would have been to ensure the system is

ready and able to identify and verify a new version of firmware and allow patching of the

newer version of firmware.

Therefore, it would have been obvious to combine Tanaka with Hirst to obtain the invention as specified in claim 37.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. To further show the state of the art please refer to the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Haskins can be reached at (571) 272-7406. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.
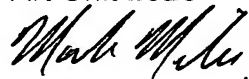
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Mark R. Milia
Examiner
Art Unit 2625

MRM

TWYLER LAMB HASKINS
SUPERVISORY PATENT EXAMINER